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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,532

12/23/2005

Yuka Kurita

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EXAMINER

SU, SUSAN SHAN

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,532	<b>Applicant(s)</b> KURITA ET AL.	
	<b>Examiner</b> SUSAN SU	<b>Art Unit</b> 3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2-10 and 12-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-16 is/are allowed.
- 6) ☒ Claim(s) 2-4 and 6-9 is/are rejected.
- 7) ☒ Claim(s) 5 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of Claims***

Claims 2-10 and 12-16 are pending, wherein Claims 2-4, 8-10, and 12-16 are amended. No new matter is added.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8 & 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 8 & 9 recite the limitation "body fluid diffusion layer" in lines 5 and 3, respectively. There is insufficient antecedent basis for this limitation in the claim. It is believed that the claims are dependent on Claim 3.

Claim 9 also recites that the body fluid diffusion layer has a water absorption of "100 millimeters or more in ten minutes." This is held indefinite because this suggests that the water absorption can be indefinitely large.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushita (US 5,885,264).

With regard to Claim 4, Matsushita teaches a body fluid absorbent article (1), wherein

an absorbent (17 & 18) is provided in a body fluid absorbent portion and includes a body fluid absorption (nonwovens are known to be absorbent) and holding function (Col. 3 lines 56-61) and a shrinkage function (Col. 2 lines 54-56) when contact with a body fluid;

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an absorption control layer (32) is provided on said absorbent, and a liquid impermeable range of which is reduced whenever a body fluid is excreted (since the adhesive 32 is urine-soluble, its liquid impermeable range reduces because it melts away);

said absorbent includes a fixed portion fixed to the article (see Fig. 4 where layers 17 & 18 are suspended in the article), and a free portion that is not fixed to the article (17 & 18 shrink upon wetting and therefore lifts off away from the rest of the article as seen in Fig. 4).

Matsushita does not expressly teach that the absorption control layer is reduced from the fixed portion side of the absorbent toward the free portion side whenever body fluid is excreted. Matsushita's absorption control layer is capable of melting in all directions, thus it is also capable of reducing from the fixed portion side of the absorbent toward the free portion side, based on location where urine is first deposited onto the absorbent article or the exact pattern of how the absorption control layer is applied onto the absorbent. One skilled in the art has reason to expect the absorption control layer to reduce from all directions, one of which would be from the fixed portion side to the free portion side, under normal operation. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Matsushita by placing the absorption control layer so that it reduces from the fixed portion to the free portion for the purpose of allowing the layers 17 & 18 gradually lift away from the rest of the absorbent article.

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With regard to Claim 2, Matsushita also teaches that the liquid impermeable range (where adhesive 32 is applied, i.e. in the middle of the absorbent article) includes a body fluid receiving portion defined as a range in which the excreted body fluid is received first within said body fluid absorbent portion (it is inherent that the body fluid is first received in the central region, where the adhesive 32 is used to keep layers 17 & 18 attached to the rest of the article).

With regard to Claim 6, Matsushita also teaches that the absorption control layer is configured so as not to block at least a contact between a fixed portion-side end of the free portion of said absorbent and the body fluid (the layers 17 & 18 are free to receive body fluid without blockage from the urine-soluble adhesive 32).

7. Claims 3, 7, 8, & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushita in view of Hamajima et al. (US 5,496,626, "Hamajima"). Matsushita does not expressly teach a body fluid diffusion layer but teaches a body fluid storage portion (13, which extends the entire length of the absorbent article and therefore would cover a body fluid receiving portion). Hamajima teaches a body fluid diffusion layer (2A, Col. 10 lines 32-41) and that the diffusion layer covers the liquid impermeable range (since the diffusion layer is described to prevent liquid residue at the topsheet and would therefore need to be at the body fluid receiving portion, which overlaps with the liquid impermeable range). Hamajima also teaches that the body fluid diffusion layer consists of a fiber assembly sheet (Col. 4 lines 8-14) having a Klemm water absorption of 100millimeter or more in ten minutes (Col. 5 lines 55-59). Although Hamajima does not expressly teach that the body diffusion layer protrudes outside the liquid

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impermeable range, but varying the amount of water-soluble adhesive (which provides the liquid impermeability) to change the area that it covers requires only routine skills in the art. Therefore one skilled in the art would be able to determine the liquid permeability range as it is necessary for maintaining structural integrity of the article while using less material. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Matsushita with Hamajima for the purpose of more evenly distributing fluid to the entire absorbent. After the modification, the body fluid storage portion would contact the body fluid diffusion layer.

***Allowable Subject Matter***

8. Claims 5 & 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Claim 5, no prior art is found to teach or suggest a cylindrical absorption control layer wherein the absorbent is inserted into an inner cavity of the absorption control layer. The prior art of record Matsushita teaches a urine-soluble adhesive 32 which can act as the absorption control layer but it would not be obvious to modify the adhesive so that it encircles the entire topsheet (layers 17 & 18).

Regarding Claim 10, although it is known in the art that a liquid permeable surface layer may be added on top of a topsheet (the topsheet of Matsushita is interpreted to be the absorbent in the body fluid absorbent portion), such as shown in Mishima (US 2007/0239132) of Sugiyama (US 2004/0039363), but in those cases the

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purpose of the liquid permeable surface layer (e.g. excrement receiving structure 1 of Mishima or skin contact sheet 18 of Sugiyama) is to keep the wetness away from the skin of the user. The invention of Matsushita is provided with a shrinkage function so that the topsheet will stay in contact with the skin to provide the user a sense of wetness, the function of which would be destroyed by incorporating another surface layer.

Claims 12-16 are allowed.

The following is an examiner's statement of reasons for allowance: no prior art has been found to teach or suggest that the absorption control layer is a water soluble film having an absorbent-side surface that is not subjected to water repellant treatment and an opposite surface subjected to water repellant treatment. Furthermore, an opposite teaching is found in prior art Champaign, Jr. (US 3,651,809) which teaches a disposable absorbent article with a water-soluble film wrapped around parts of the absorbent, the film is coated to repel water on the surface that faces the absorbent to prevent leakage.

Other relevant prior art references on the record also fail to teach the above limitations. Ashton (US 2,964,040) teaches an absorbent article with an absorbent wrapped on the underside by a water repellent layer, but the water repellent layer is made of polyethylene (which is not water soluble). Strawinski (US 2,546,705) teaches a multi-layer absorbent wherein the interior layer is a polyvinyl alcohol film and the two exterior layers are cellulosic webs that may be treated with a water-repellent process.



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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUSAN SU whose telephone number is (571)270-3848. The examiner can normally be reached on M-F 9:00AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Susan Su/  
Examiner, Art Unit 3761  
/Tatyana Zalukaeva/

Supervisory Patent Examiner, Art Unit 3761